REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 3, 5-9, 11, and 13-16 are pending in this case. Claims 1, 5, 6, 9, 13, and 14 are amended and Claims 2, 4, 10, and 12 are canceled by the present amendment. The changes to Claims 1, 5, 6, 9, 13, and 14 correct matters of form or incorporate the subject matter of originally-filed Claims 2 and 10. Thus, amendments to Claims 1, 5, 6, 9, 13, and 14 add no new matter.

In the outstanding Office Action, Claims 1-6, 8-14, and 16 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ma et. al. (U.S. Patent No. 7,102,967, herein "Ma"), and Claims 7 and 15 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ma, further in view of Nobukuni et. al. (U.S. Pub. No. 2001/0053115, herein "Nobukuni").

Applicant respectfully traverses the rejections under 35 U.S.C. § 103(a).

Amended Claim 1 is directed to a disk apparatus and includes:

> a photodetection unit configured to divisionally detect light reflected by the disk as a plurality of photodetection signals; and
>
> a tracking error signal generation unit configured to generate a tracking error signal on the basis of a phase difference between the plurality of photo-detection signals detected by the photodetection unit, wherein
>
> the tracking error signal generation unit includes an equalization unit configured to equalize waveforms of the plurality of photodetection signals detected by the photodetection unit,
>
> the equalization unit has first frequency-gain characteristics that obtain a maximum gain of not less than 15 dB at a frequency corresponding to a shortest pit or mark, and second frequency-gain characteristics in which a gain attenuates within a frequency band not less than the frequency corresponding to the shortest pit or mark, and
>
> the equalization unit has third frequency-gain characteristics that obtain a gain of not more than -3 dB at a frequency three times the frequency corresponding to the shortest pit or mark.

The outstanding Office Action asserts, at pages 2 and 3, that Ma teaches every element of Claim 1 except the equalization-gain characteristics recited in Claim 1, which are asserted as obvious "after routine experiment to discover the optimum range."

Ma describes a four-section optical detection unit wherein two sets of summation signals are generated, the summation signals are equalized and then differentiated to remove noise, and then binarization level compensation is performed. In Fig. 8, Ma depicts gain versus frequency for the equalizers and shows that gain is minimum at f1 and maximum at f2.

Ma does not teach or suggest any relationship between f1 or f2 and "a frequency corresponding to a shortest pit or mark," as recited in Claim 1. The outstanding Office Action concedes this fact but asserts that routine experimentation would lead to the frequency-gain characteristics recited in Claim 1.

Applicant respectfully submits that the assertion of optimization of range through routine experimentation is improper in this instance. According to MPEP § 2144.05, where a range of values is asserted as obvious based on routine experimentation for optimization, "[a] particular parameter must first be recognized as a result-effective variable." Ma contains no discussion of the values of f1 and f2 or a basis for those values. Ma makes no suggestion that a relationship between frequencies f1 and f2 and a frequency corresponding to a shortest pit or mark is optimal in any respect. Thus, Ma has not suggested a recognition that the frequencies f1 and f2 are "result effective" variables and cannot be properly combined with a range recited only in the claimed invention for a valid rejection under 35 U.S.C. § 103.

Thus, Applicant respectfully requests that the rejection of Claim 1 under 35 U.S.C. § 103(a) be withdrawn.

Claims 3 and 5-8 depend from Claim 1 and are, therefore, patentable for at least the same reasons as Claim 1. Further, Nobukuni, which is cited against Claim 7, fails to cure the

deficiencies of Ma at least with respect to Claim 1. Thus, Applicant respectfully requests that the rejections of Claims 3 and 5-8 under 35 U.S.C. § 103(a) be withdrawn.

Claim 9 is directed to an information processing method and, though differing in statutory class and scope, recites an equalizer substantially similar to the one recited in Claim 1.

Thus, Applicant respectfully requests that the rejection of Claim 9 under 35 U.S.C. § 103(a) be withdrawn for the reasons discussed above with respect to Claim 1.

Claims 11 and 13-16 depend from Claim 9 and are, therefore, patentable for at least the same reasons as Claim 9. Further, Nobukuni, which is cited against Claim 15, fails to cure the deficiencies of Ma with regard to at least Claim 9. Thus, Applicant respectfully requests that the rejections of Claims 11 and 13-16 under 35 U.S.C. § 103(a) be withdrawn.

Accordingly, the outstanding rejections are traversed and the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

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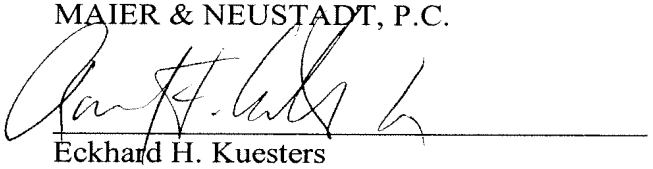

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